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THE LATE M. ARLOING.

In this week's issue we include a portrait of the late M. Arloing. At the same time we here give a short account of the deceased scientist's funeral, condensed from a much fuller one which appeared in the pages of our contemporary, *La Semaine Veterinaire*.

The funeral took place from the Lyon School, over which Arloing had presided so long and so well, and, as our contemporary justly remarks, "This man, whose modesty was only equally by his love of work and of difficulties to be overcome, united around his coffin the most conspicuous notabilities of the learned world and all the civil and military authorities." Space permits only to say that medicine, agriculture, the law, letters, and the military and public health services, were all adequately represented round Arloing's grave, in addition to such veterinary representatives as the President of the Commission of the International Congress, and the Directors of the Schools of Alfort and Toulouse. The funeral orations, the first of which was given by the Rector of the University of Lyon, paid ample tribute to Arloing's memory; but perhaps the most touching tribute of all lay in the speech that was never completed. The veteran Chauveau, an old co-worker with Arloing, who represented the Minister of Agriculture, began to speak; but he could only deliver a few words before his emotion prevented him from proceeding.

Thus passes Arloing—mourned by scientists throughout the world, by the country, the city, and the school which have profited so greatly by his life, and perhaps most of all—apart from his own kindred—by such men as Chauveau, who have worked with him on terms of personal intimacy, and who can best appreciate his professional and private worth. He died unexpectedly, at an age at which he could still reasonably have hoped for years of productive labour. Two personal ambitions we know he had, both of which he might have lived to see realised.

One was to see a fitting celebration of the 150th anniversary of the Lyons School—the oldest veterinary School in Europe—next year. That celebration will take place, but without the presence of the man who for many years has been the guiding spirit of the School. As was mentioned by Col. Aureggio, of the French Army Veterinary Service, in one of the funeral orations, it is proposed that the anniversary shall be marked by the establishment of an International Veterinary Museum at Lyons; and it is now suggested that the museum should contain a suitable monument to Arloing. It is to be hoped that this monument will be erected; though no monuments can adequately commemorate the services which Arloing has rendered.

The second of Arloing's personal ambitions concerned the scientific subject which occupied so much of his time and energies during the later years of his life. We all know with what assiduity Arloing applied himself to the study of tuberculosis, especially with the object of discovering a reliable method of protective inoculation for cattle. After much labour, he devised a method which has given him very encouraging results; but it remains to be seen whether very extensive practical trials under ordinary agricultural conditions will justify the hopes which have been formed of Arloing's system of protective inoculation. But be that as it may, there can be no question of the merit and the value of Arloing's work to this and to future generations, even as it appears to us to-day. As a teacher and an administrator, he rendered inestimable service in his own country; and as much of such work as this is impossible to correctly appreciate, we can take the abundant recognition of Arloing's value which his death has evoked in his own country as more suggesting than indicating the magnitude of his influence. As a pure scientist, his individual work has cast fresh light upon general and special scientific subjects alike; and the historian of bacteriology a century hence will rank Arloing's name among the best of this period.

TUMOUR IN POSTERIOR NARES.

In August, 1908, I was consulted about a thoro'bred gelding, eight years old, used for racing purposes. The trainer reported that he had a discharge from the off nostril for two or three weeks.

I examined him and found a discharge coming from both nostrils, rather more from the near than the off; and the discharge smelt very offensively, careful inspection of the mouth, percussing the sinuses, etc., gave negative results. The trainer said that the discharge was copious when he came in from work on the racecourse, but slight at other times. Up to the time I made my examination he had not noticed any smell. The bone over the frontal sinus on the right side was slightly more prominent than on the left side, but it was perfectly firm and gave me no idea of bulging from disease. I said I thought it probable that there was matter accumulating in the sinuses, but possibly it was some abscess or other obstruction at the back of the nostrils, and I thought it advisable to wait for further developments, using in the meantime steam inhalations, and internally hypo sulphite of soda.

I did not hear anything further for two or three weeks, then the trainer met me and said the horse

was rather worse, and he had asked another practitioner who happened to be in Poona to look at him, and he had suggested trephining: Would I operate? I consented, and had the horse sent up to this institution. I now found that the passage of air through the near nostril was quite occluded and the discharge from the nostril was very foul. Before operating I pointed out that I thought there was something more serious than pus in the sinuses, in fact everything seemed to point to a growth of some kind blocking the passage of the nostril.

He was thrown, and after the usual local anæsthesia had been induced the frontal sinus on the right side, where the prominence was, was opened. This proved to be healthy. Next the frontal sinus on the near side was opened. This was full of pus, so a further opening was made over the division between the anterior and superior maxillary sinuses, and the patient was allowed to rise. The sinuses were then washed out with the hose. Drainage was not very good at first from either side. The openings in the frontal sinuses were in the position commonly recommended, viz., in the right angle formed by a line drawn from the process of the temporal bone to another with the central line of the forehead. So in a few days I opened the superior maxillary sinus on the right side, and as the anterior sinus on the left side appeared healthy I made another hole in the superior wall above the original one. After this drainage both from one sinus to another and from the sinuses to the nostril was fairly good, but there was still the smell from the left nostril, and still no passage of air through it. The openings on the right side were allowed to close, but the left were kept open—with no improvement in the passage of air or smell.

My ideas as to the existence of a tumour in the post nares were now strengthened, and my prognosis to the owner was bad, as I did not see how it could be got at.

In consultation with the previous mentioned practitioner, I decided to open the frontal sinus at its lowest extremity (in the spot recommended by Craig), and then sawing out a strip of bone between the original opening in the frontal and the new one, with the idea of getting a good look into the part. I carried this out, but could see little beyond the inside wall of the sinus which appeared healthy. After a few weeks, as no improvement was shown, I decided to again throw him and remove the inside partition of the frontal sinus.

He was getting very troublesome now when he saw the casting bed, and in struggling to get way from it, suddenly a fleshy mass fell out the near nostril followed by a little blood, and the passage of air appeared normal.

The fleshy mass weighed just over a quarter of a pound (4¼ oz.) and was shaped very like the end of a horsh's tongue. The part that had been attached was green and necrotic, and had attached to it a triangular flat piece of bone. The fore part was covered with mucous membrane and was firm in consistence.

After this recovery was uneventful and complete—the wounds healed up, smell disappeared, the passage of air remained free, and the discharge ceased. He was discharged from hospital in January, 1909, and since then has raced a good deal and has won some good races.

I had the tumour sectioned and found it was composed of fibrous tissue. I presume the flat piece of bone attached to the tumour must have been a portion of the vomer. I have some difficulty in finding a reason why the tumour suddenly sloughed away like it did.

E, E. Martin, Major A.V.C.
Army Veterinary School, Poona.

CYSTIC CALCULI AND RUPTURED BLADDER IN THE DOG.

I was called to-day (Wednesday) to see a curly coated retriever dog, aged about 2 years.

The owner informed me that the dog was taken ill on Sunday (26th), refused his food, and, when let off the chain, tried in vain to urinate. Later on he managed to get rid of less than a tablespoonful of very bloodstained urine. Various remedies were tried, ranging from castor oil to gin, but as the dog got worse the owner at last decided to call me in.

I found the animal in a state of collapse, and obviously in a very critical condition.

On trying to pass a catheter, I found that its further progress was arrested about an inch in front of the testicles by a large calculus. More with the idea of practising an infrequent operation than in the hope of doing any material good, I had the animal brought round to the infirmary and placed on the operating table.

The operation was performed in the usual way, by cutting down direct on to the stone and removing it. No anæsthetic was required, as the dog seemed incapable of feeling, and in fact stimulants were given before the operation.

The stone removed was the size of a large pea, and weighed 5½ grains. I was rather puzzled when, on getting the catheter into the bladder, no rush of urine resulted. Soon after the wounds had been sutured, the dog passed quietly away.

A post-mortem revealed some interesting features. The abdomen was full of what was evidently discoloured urine which had escaped from the bladder. On examination of the latter I found a rupture 3½ inches in length on the upper surface. From the appearance of the edges it certainly seemed as if the rupture had taken place several hours before. The mucous membrane of the bladder was thickened and much inflamed, in places almost gangrenous. There was one large calculus (which was the size of a marble and weighed 31 grains), and a number of small ones varying in size from that of a split pea downwards. The prostate gland was enlarged and indurated, but the kidneys were normal in size and showed no trace of calculi.

Sidney Smith, jr., M.R.C.V.S.
Lowestoft. March 29.

MALIGNANT ŒDEMA.

By HENRY GRAY, M.R.C.V.S.

This disease, variously termed "gangrenous tumour," gangrenous septicæmia, gaseous or traumatic or hospital gangrene, traumatic spreading gangrene, and by laymen "mortification," "inflammation" is not rare, especially in certain districts, during certain seasons and under special climatic conditions.

It is very common in the horse and in man, in the sheep and cat, to a less extent in the ox and pig, and very rare in the dog.

It has been well studied by veterinary surgeons and comparative pathologists. Renault's work on it in 1833 is looked upon as a monument to veterinary observation. Pasteur (1877) pointed out the difference between the vibrion septique and the bacillus of anthrax, but before this Chauveau (1875) studied the *rôle* of the causal organism, which was re-studied by Koch in 1881, and accidentally found by him in the earth and named the bacillus of malignant œdema. Chauveau and Arloing (1884) made further researches, and contributed largely to the knowledge of it.

Roux and Chamberland (1887) made known the immunizing properties of the soluble substances secreted by the microbe. Penzo (1891) and also Besson (1895) determined the conditions and intimate means of infection. Leclainche (1898) and afterwards Leclainche and Morel (1900) introduced the serotherapic treatment of it.

Pasteur's vibrion septique has received various names, such as Bacillus septicus (Macé), Bacillus septicus gangrenæ (Arloing), and finally Bacillus of malignant œdema by Koch.

In the horse it chiefly occurs as a spreading gangrenous œdema following accidental wounds, or as a septic peritonitis after castration; in the sheep (especially fat lambs or older sheep) after castration or wounds inflicted during shearing; in the cat from wounds in the feet, and in the pig from bites, or following castration or spaying.

In the ox, in which it is not so frequent, it follows parturition and, more rarely, wounds, even those due to setoning and in which it is generally mistaken for blackleg.

In the dog it certainly occurs but is very rare, especially in its external manifestation.

It attacks fat animals, especially those of a lymphatic temperament more than the lean or highly muscular. Bleeding into the scrotum after castration in fat lambs or adult rams is very commonly the cause of malignant œdema in them. Punctured wounds in farm animals are often followed by malignant œdema. It is rarely, if ever, seen after suppuration or cicatrisation has set in. It is a *more prevalent disease than tetanus*, especially in certain districts, where it is *well known* to the local practitioners, who are generally called in too late to render any useful service in combatting the malady, which may develop within 24 hours after receipt of an injury however small, and in the majority of cases death ensues within four or five days.

It might be mistaken for black-quarter in the cow after calving. The writer, however, has seen black-quarter in freshly calved cows at the same time as younger cattle were affected in the same premises during winter.

Every case of progressive œdema, or of peritonitis following castration, or perforative abdominal wounds should not be ascribed to the malignant œdema bacillus.

Probably its rarity in the dog is in consequence of this animal living on putrescence it becomes immune.

Experimental transmission is more readily obtained in the young of all species; older or adult animals being more refractory.

Serotherapy should be tried as a preventive as well as a curative. But the question arises, From whence can this serum be obtained? It must be used promptly. No other method has any value.

The writer is of opinion that the reason of it not being more recognised than it is as malignant œdema is because it has not been well described in any of our modern text-books on veterinary surgery. The fact, however, remains it is a common disease, well known to a great number of country veterinary surgeons, and of farmers as "inflammation" or "mortification." It is very rare in the horse in London.

ABSTRACTS FROM FOREIGN JOURNALS.

BOVINE PULMONARY ACTINOMYCOSIS.

Morel (*Journal de Med. Vet. de Lyon*) reports a slaughterhouse observation upon the carcase of an ox. The animal was four years old, and in a completely fattened condition. Upon opening the carcase Morel was surprised to find that the lungs were voluminous and were intimately united to the pleuræ and the diaphragm by pseudo-membranes of lardaceous aspect.

The evisceration, practised methodically, demonstrated the following conditions.

The diaphragmatic aspect and the root of the lung, the external surface of the fibrous layer of the pericardium, and the central anterior portion of the diaphragm were the seat of a vast pseudo-membraneous production, the centre of which was occupied by a large abscess of the size of a skittle ball, filled with malodorous pus (which was characteristic of an abscess communicating with the gastric reservoirs). From this abscess a fistula proceeded, terminating in the reticulum, to the left and about four inches from the œsophageal orifice.

The lungs, united to the costal pleuræ, were voluminous, were not collapsed, and showed a greyish colour generally, suggesting the aspect of lardaceous tissue, or, more accurately, of an enormous encephaloid sarcoma. Upon palpation they resisted pressure, giving the sensation of a multilobular tumour, with spaces which were more compressible and elastic, and which corresponded to portions where the pulmonary tissue had preserved its normal constitution.

When incised, the lung showed perfectly round or ovoid masses, reddish-grey, well defined, and ranging from the size of a nut to that of an infant's head. They were especially abundant around the abscess described above; and upon section they showed small purulent centres, sulphur coloured, and ranging from the size of a millet-seed to that of a pea.

The bronchial, prepectoral, suprasternal, and diaphragmatic lymphatic glands were slightly hypertrophied, were not succulent, and showed the cortical and medullary zones very distinctly.

The pleuro-pulmonary adhesions were reddish, rather resistant to pressure, and showed no trace of the infection which became apparent later in the examination.

The pericardial serous layer and the myocardium were healthy. No trace of tuberculosis or of bacillary infection was found by the microscope. Microscopical examination of a drop of the pus, however, revealed the presence of a multitude of actinomycotic clumps taking the Gram and Weigert stains.

The absence of specific glandular lesions and the staining reactions enabled actino-bacillosis to be excluded from the diagnosis.

As regards the etiology, Morel thinks that it is incontestable that the infection was produced by the introduction into the thorax of a foreign body proceeding from the reticulum and contaminated by actinomyces, Despite search, this foreign body was not found; but the greenish-brown aspect of the interior wall of the fistula and the peculiar odour of the pus, sufficiently indicated the progression of a foreign body proceeding from the digestive apparatus.

The ulterior generalisation of the affection had been produced by means of the lymphatic system. —(*Annales de Méd. Vet.*)

Cerebral Localisation of a Larval Œstrus.

Diego Blasi reports (*Revista de Medicina Veterinaria*) the following case of a sheep, aged a year and a half. For some months the animal had shown continual and progressively increasing somnolence, with an equally progressive diminution of sensibility and almost complete loss of sight.

When the author examined the animal, he found the following symptoms. There was emaciation, and the mucous membranes were pale, with the exception of the conjunctiva, which was congested. The vision was almost abolished. Locomotory inco-ordination was present, with a tendency to turn towards the left. The muscles of the neck were contracted. The head, which was inclined to the left, showed hyperæsthesia of the cranium in the region of the frontal bones. The temperature was normal, the pulse and respiration were diminished.

The diagnosis was either *cœnurus cerebralis* or a cerebral neoplasm, with localisation upon the right side. Treatment (the nature of which is not stated) was instituted, but the animal died at the end of three days.

Post-mortem, lesions of anæmia were found. In the cranial cavity, the meninges were congested; the encephalic liquid was a little more abundant than usual and was reddish in colour, and the superficial vessels and those of the choroid plexuses were congested. In the right lateral ventricle, which was very dilated and filled with liquid, was a larva of *œstrus ovis*.

This lesion had caused compression of the optic layers and the neighbouring cerebral regions, and thus induced amaurosis and the other nervous symptoms.—*Annales de Med. Vet.*

Paralysis from Compression by a Cerebral Neoplasm.

A. Inchaurreguy records (*Revista de Medicina Veterinaria*) the case of a horse, which showed the characteristic physiognomy of facial paralysis. The lips were immobile and insensitive, the nostrils were inert, and contracted during inspiration, the ears were drooping, and the tongue was pendulous outside the mouth. In addition paresis was present, and was especially marked upon the left hind limb.

The owner's account was that the symptoms were of five days' standing.

The author diagnosed cerebral compressions, and suggested the probability of a tumour situated in the neighbourhood of the annular protuberance. The horse was treated with injections of strychnine, and received milk as food. For the next two days a slight amelioration was observed, but the animal then showed the symptoms of pneumonia from a foreign body and died.

The autopsy revealed the presence of a carcinoma the size of a small nut upon the annular protuberance, and some granulations of the same nature upon the choroid plexuses.—*Annales de Med Vet.*

Tumour of the Neck of the Uterus in a Bitch.

Auger records (*Journal de Med. Vet. de Lyon*) the case of a four-year-old "brach" bitch, which showed a sanguinolent discharge, intermittent and not abundant, from the vulva. Upon vaginal exploration the finger felt nothing abnormal, but was covered with muco-sanguinolent liquid when withdrawn. Palpation of the abdomen revealed the presence of a hard, voluminous, cylindrical body elongated in a direction parallel to the axis of the body, and extending forwards from the pubis and backwards to the interior of the pelvis. This body gave exactly the impression of a fœtus contained in the uterus, but the discharge was not fætid, as would have been the case had a dead and decomposing fœtus been within the uterus.

A speculum was introduced into the vagina, and a rounded, mammillated, projecting mass, which could only be a neoplasm, was perceived. The diagnosis of a tumour of the neck of the uterus or an uterine tumour in the vicinity of the neck was therefore easily made. The only treatment which appeared possible was ablation of the tumour after hysterotomy or by hysterectomy.

Laparotomy was performed, the incision being made along the linea alba from the umbilicus to the

pubis. When exposed, the uterus appeared voluminous as if in the gravid condition, but the uterine body alone was especially developed. It contained a hard mass, extending from before backwards and engaged in the pelvis parallel to the rectum. This mass did not appear adherent to the uterine wall throughout its extent, but seemed, on the contrary, to possess a little mobility within the uterus; moreover, the uterine walls were far from being thickened. It was not, therefore, a case of diffuse tumour of the uterus.

Hysterectomy was impossible, as the neoplasm extended beyond the neck of the uterus as far as the entrance to the vagina, and was too profoundly situated in the pelvis to allow of a ligature being placed upon the vagina behind it.

Hysterotomy was therefore attempted. The uterus was opened, bringing into view a mammillated whitish tumour, which was ligatured at its base with very tightly drawn silk and then resected. It was then seen that a portion of the uterine wall had been removed along with the neoplasm. Ligatures were then placed at the extremity of the uterine horns and behind the neck, and hysterectomy was performed. The abdomen was then closed, the skin sutured, and a dry dressing applied.

All went well for two days after the operation; on the third day, however, the bitch tore away the bandage. This accident was immediately repaired, but the temperature rose from that moment, reached 104 F., and remained at that level. The bitch died of peritonitis seven days after the operation.

The tumour was almost cylindrical in shape, was about four inches long and from 1 3-5th to 2 inches in diameter. It weighed more than 150 grammes (150 grammes=about 5oz.) Microscopic examination showed it to be a cystic fibro-myoma. —*Annales de Méd. Vét.*

Pleural Melanosis causing Fatal Syncope in a Mare.

Cuny records (*Journal de Méd. Vét. de Lyon*) the case of a Percheron mare, seven years old, which, until the day before her death, had always done excellent and regular service at light work. For three or four days past, however, she had almost completely ceased to eat; and Cuny was called to examine her because, in the course of her journey, she had appeared much weaker than usual, had become greatly out of breath, and had been obliged to stop frequently.

Seen in harness, immediately after her entrance into the yard, the animal showed intense dyspnœa. The head was markedly extended upon the neck, the nostrils were widely dilated, and the respiration was very tumultuous. The number of the respiratory movements was so elevated that it was impossible to estimate them exactly, but more than a hundred per minute were counted.

The conjunctiva was dark red; and all the superficial veins appeared very largely dilated. The temperature was 103·4 F.

The animal was placed in the stable; and the dyspnœa then diminished by degrees, thus permitting a complete examination. The respiration always remained accelerated—about fifty movements to the minute—and was manifestly discordant. Percussion and auscultation yielded negative results.

The pulse showed irregularities in its force, in its frequence, and in its rythm. The pulsations were nearly all small; but from time to time one or several more powerful than the rest were noticed. as if the heart had suddenly regained its normal energy. The number of pulsations, which averaged 150 per minute, was subject to variations resulting from frequent intermittencies. These intermittencies were of variable length, and each followed upon a series of very accelerated pulsations.

The examination of the heart revealed irregularities of the same nature. The cardiac sounds were dull and ill-defined; and their rhythm was completely altered. Evidently there was profound disturbance of the organ; but its great acceleration, as in the case of the respiration, prevented the precise estimation of the symptoms. The intermittencies alone were clearly perceptible.

Cuny diagnosed the commencement of an infectious malady of the respiratory apparatus with grave cardiac disturbance, and instituted treatment upon this supposition. The mare seemed to improve, and the owner, seeing her the next day at the moment when she was eating a few oats with avidity, believed her to have recovered. The very next moment, however, she suddenly fell to the ground aud died at once.

Post-mortem, the opening of the thorax revealed the existence of numerous melanotic tumours, distinctly isolated from one another, and varying from the size of a pea to that of a large hazel-nut.

These tumours were irregularly disseminated over the parietal and visceral pleura, with a distance of two to four inches between them. They existed upon both the costal and the diaphragmatic pleura and upon the posterior mediastinum. In the cardiac region, in place of being isolated, they were united in groups which surrounded the cardiac muscle in the manner of a thick wreath, masking the auricles and the great vessels. The only part which was not covered with them was that portion of the ventricle which comes in contact with the chest wall in the cardiac contractions. The lesions were symmetrical.

At the entrance to the thorax was a compact lump of tumours which had destroyed the anterior mediastinum, and which were enclosing the anterior lobes of the lungs, and completely burying the blood vessels and the cranial and sympathetic nerves.

No trace of melanosis existed either in the pericardium or in the pulmonary tissue.

The author remarks that these lesions are sufficiently significant to permit the easy deduction of the pathogeny of the symptoms which were observed and of the sudden death. In consequence of the compression which was exercised upon the auricles and ventricles, the heart found difficulty in filling itself with blood; insufficient hæmatosis arose from this, and was compensated for by a great acceleration of the respiration. The sudden death

was in consequence of syncope, which arose from the compression of the cardiac muscle and of the nervous branches proceeding thither.

The case is interesting from several points of view, and Cuny draws the following conclusions from it:—

(1) That extensive lesions of melanosis are not exclusively confined to old horses, for the subject in this case was scarcely seven years old.

(2) That melanotic tumours in very complex anatomical regions, such as the anterior mediastinum and the base of the heart, may acquire enormous dimensions without, for a long time, giving rise to any appreciable trouble.

(3) That cardiac syncope may occur from exclusively pleural lesions. This fact is recognised, but its occurrence is rare, even in the case of pleurisy with abundant effusion.—*Annales de Méd. Vét.*

W. R. C.

VETERINARY REPORT, INDIAN DIVISION, EGYPT, 1882.

(*Concluded from p. 638.*)

33. Having performed the duties entrusted to me at Ismailia in the matter of the Syrian remounts, contractors' camels, etc., and made all the necessary arrangements in connection with the glandered troop, and installed Veterinary Surgeon Savage at Ismailia, I left for the front on the evening of the 12th, and on arrival at Tel-el-Kebir on the morning of the 13th September, I found that the head-quarters, Indian contingent, had gone on in the direction of Zagazig. I hurried on after them until I caught up Sir Baker Russel's cavalry brigade. By this time I had passed the canal crossing for Zagazig, so had no other alternative than to go on to Belbeis and Cairo, arriving there on the morning of the 15th September, and left Cairo for Zagazig by train same evening, where I arrived on the 16th. On the 17th I inspected all Indian contingent animals at Zagazig, and I was surprised to find them all looking so well after their long and trying march of the 13th after the battle. I was also astonished to find so few of the transport animals rendered *hors de combat* from sore backs and lameness, as, after the battle of Tel-el-Kebir, I saw many of them struggling along through heavy sand with enormous loads badly put on. I particularly observed this amongst the mules attached to the cavalry and Madras sappers; this I reported to the Director of Transport at the time.

34. The daily state of the transport department on this date only showed twenty sore-backs and fifty lame. This speaks volumes for the altered ordnance transport pack saddle used throughout the campaign, and which I had the honour of introducing during the second Afghan campaign.

35. On the 15th September, Veterinary-Surgeon Savage reported an outbreak, at Ismailia, of rinderpest amongst commissariat slaughter cattle, which, by his prompt action, he entirely stamped out. About this time commissariat slaughter cattle were dying at Kassassin; for further particulars, *vide* file on rinderpest already submitted.

36. On the evening of the 17th I left Zagazig for Ismailia, which place I arrived at on the morning of the 18th, to inspect and take over 300 mules expected from Beyrut, but as they did not arrive during the 18th, the date on which the contract lapsed, I returned to Zagazig on the 19th, where I remained until the 21st. While at Ismailia on the 18th, I inspected the base hospital, where I found eight Bengal cavalry horses unfit to march and not likely to recover, and, with the sanction of General Commanding the Indian contingent, a board was applied for and they were destroyed.

37. On the 20th September I ordered Veterinary-Surgeon Savage to proceed to Suez for the purpose of inspecting the glandered or 1st troop, 6th Bengal Cavalry, which left Ismailia on the 16th. He found one animal glandered. This has already been referred to in my file on glanders. I also ordered that officer to break up the base hospital at Ismailia on his return from Suez. He accordingly despatched the sick animals in charge of salootries and nalbunds, to march to Abesseyeh, and as Mr. Weathrall was placed on the sick list, came on himself, by rail, with the veterinary medicines, stores, etc.

38. On the 24th, the Ismailia base hospital was broken up, forty-eight mules and one donkey marched for Abesseyeh, as above stated, in charge of salootries and nalbunds, where they arrived on the 5th October.

39. On the 21st September I left Zagazig with the head-quarters, Indian contingent, for Cairo by rail. Transport and all other animals marched by road from Zagazig to Abesseyeh. On arrival at the latter place I formed a transport hospital, the sick report of which on the 23rd was as follows, viz:—wounds 122, girth-galls 10, lame 13—total 145. And as the regimental transport was handed over to the transport department, the sick list increased to 615, the largest number ever under treatment at one time, viz., 530 wounds, 19 girth-galls, and 66 lame=615. The wounds were mostly very trifling, more than half of them were caused by the jhul, or blanket, not being properly folded under the saddle. The girth-galls were chiefly caused by careless girthing and crossing the girths, and the lameness from sprain of the suspensory ligaments, from carrying heavy loads through deep sand. I observed that the animals so affected were generally those with long oblique pasterns, leggy, young or very old, nineteen of which were incurably lame, and were destroyed; 200 more, comprising the worst cases of wounds, lameness, old and worn out, were sold.

40. During my stay at Abesseyeh, I again inspected all the animals belonging to the Indian contingent, with H-1 Royal Artillery, 7-1 Royal Artillery, 2nd Bengal Cavalry, 6th Bengal Cavalry, 13th Bengal Lancers, and transport department. The Artillery and transport department mules were simply perfection. The horses of H-1 Royal Artillery were drawn very fine, had a tucked up appearance, which plainly showed that they had been doing work for which they were unsuited, being much too light for the heavy draught imposed upon them, dragging guns and wagons through the heavy sand of the desert.

41. The horses of the 2nd Bengal Cavalry looked stale; those of the 6th Bengal Cavalry looked as if they had never left India, looking as well as horses could look, while those of the 13th Bengal Lancers were the worst; but it must be borne in mind that not only did the horses of this regiment suffer more during the voyage than any of the others, but that to their share fell most of the hardest work of the campaign, which they performed exceedingly well.

42. During my inspection I selected from the Bengal cavalry regiments and transport department the animals I held to be not worth the expense to the State of taking back to India; for instance, such as were incurably lame, greatly debilitated, worn out, too old, etc. The worst of these animals were destroyed, and the remainder were sold in Cairo. Many of the grass-cutters' tattoos were sold, as they were most advantageously replaced by mules, which were captured and procured from the Egyptian Government at a nominal price.

43. There would not have been such a large number of animals destroyed (119), cast and sold in Egypt (355), but that many animals, both of cavalry and transport,

should never have left India, being physically unfit and too old for active service, or even for ordinary service.

44. On another occasion when Bengal cavalry or transport are sent out of India, I would suggest that it should be very carefully inspected by a committee of experienced officers, of whom one should be a veterinary surgeon, by which means none but serviceable animals would be permitted to leave the country, and entirely prevent the recurrence of such a disaster as the embarkation of diseased animals (*vide* file on glanders), as occurred during the late campaign.

45. For any future campaign, when Indian artillery, cavalry, and transport are employed, I would venture to suggest that a veterinary surgeon should be detailed to accompany each regiment, also a veterinary surgeon to every two batteries of artillery, and a veterinary surgeon to every 1,000 transport animals, with a proportion of well-trained subordinates.

46. That all the veterinary arrangements should be organised by the Inspecting Veterinary Surgeon detailed to accompany the expedition, under the orders of the Principal Veterinary Surgeon, and that an experienced officer should be detailed to carefully inspect every animal before embarkation.

47. Annexed is a return of casualties and casting of the animals belonging to the Indian contingent of the Egyptian Expeditionary Force, from the time they left Bombay to the date of their return, the statistics of which incontestibly prove the superiority of our Indian horses, mules and ponies for purposes of war in any eastern country. Our losses, in spite of the utter inadequacy, in point of numbers, of the veterinary staff, are almost *nil*, when compared with those of the British portion of the force, who suffered very heavily from disease and other climatic influences. This fortunate circumstance I, in a great measure, attribute to the superior fitness of the Indian animals, for the purposes for which they were required during the late campaign, also to our superior transport and commissariat arrangements, by which our animals were always regularly fed and generally well cared for.

48. The veterinary staff of the Indian contingent consisted of one Inspecting Veterinary Surgeon, two veterinary surgeons to October 3rd; after that date three veterinary surgeons. The subordinates were one clerk (who acted as purveyor), twelve salootries and fourteen nalbunds, the latter acting as salootries, a very small number in proportion to the number of animals as compared with the veterinary staff who accompanied the British force; but, notwithstanding this serious disadvantage, our casualties and general veterinary arrangements will compare most favourably with those of the British force, a result to which I am greatly indebted to the zeal and energy displayed throughout the campaign by Veterinary Surgeons Evans and Savage, and to the subordinate veterinary staff, to whom one and all I tender my best thanks, and trust that their excellent services will not be forgotten or left unrewarded.

Remarks.—The first batch of animals left India on the 21st July, and the last batch returned to India 3rd November, 1882. The vessels *Booldana*, *Northern* and *Bundara* that sailed on the 7th August with detachments of 13th Bengal Lancers, experienced very heavy weather outside Bombay harbour, so much so that some of the fittings in the first-named vessel gave way, causing many of the horses to fall. The sowars being *hors de combat* with *mal de mer* could render little or no assistance, consequently some of the horses were trampled to death, and others severely injured; hence the large number of 42 casualties against this regiment. The loss to other corps was most trifling, considering that the voyages were made during the height of the monsoon. The diseases which carried off the 56 animals during our stay in Egypt were—pneumonia, bilious fever, enteritis, laminitis, apoplexy, and exhaustion. Of the 119 returned as destroyed for lameness, effects of wounds and diseases in Egypt, 40 are against the 6th Bengal Cavalry, 21 of which were destroyed for glanders, hence their large percentage. The remainder were destroyed for incurable sprains, paralysis, laminitis, debility and wounds received on boardship or in the field. Of the 355 animals cast and sold in Egypt, most were old, worn out, unfit for active service and ought never to have left India. Their having been allowed to proceed is attributable to the imperfect veterinary arrangements existing in Bengal cavalry regiments and transport department. The grass-cutters' ponies were advantageously replaced by mules. Of the 23 casualties that occurred on the return voyages, nine were destroyed for acute farcy, belonging to the 6th Bengal cavalry. Neither the Aden troop nor the Commissariat department slaughter cattle, sheep, and goats are included in this return."

The casualties occurring in the Indian contingent of the Egyptian Expeditionary Force from 21st July, 1882, to 3rd November, 1882, were as follows:—

Strength:	Horses and Ponies	2,491	
	Mules	4,709	
		7,200	
Died or destroyed between Bombay and Egypt (42 horses lost through ship's fittings giving way in a gale.)			
	Horses and Ponies	67	
	Mules	4	71
Died of disease in Egypt			
	Horses and Ponies	34	
	Mules	22	56
Killed in Action.	Horses and Ponies	4	
	Mules	2	6
Destroyed in Egypt for lameness, wounds, or disease (including 21 from glanders.)			
	Horses and Ponies	101	
	Mules	18	119
Cast or sold in Egypt.			
	Horses and Ponies	154	
	Mules	201	
Died or shot on voyage Egypt to Bombay (9 destroyed for Farcy.)			
	Horses and Ponies	20	
	Mules	3	23
Disembarked at Bombay.			
	Horses and Ponies	2,319	
	Mules	4,543	
		6,862	

THE CLINICIAN AND THE SCIENTIST.

By Dr. WILLIAM BULLOCK.

This is a contribution to a discussion on "Vaccine Therapy—its Treatment, Value, and Limitations," extracted from the proceedings of the Royal Society of Medicine.

"In rising to take part in the discussion on the administration, value, and limitations of vaccine therapy, I feel some difficulty in deciding to which of these questions attention should be mainly directed, as it is plainly impossible in the time at one's disposal to deal effectively with all three. It seems to me, however, that one of the principal questions refers to the *value* of the method, especially as there is a difference of opinion as to how the value is to be judged and who are to be the adjudicators. From what is being widely said, there appears to be a certain degree of resentment on the part

of many of those who practise medicine among their fellow creatures that others should enter the domain which, rightly or wrongly, they consider to be their perquisite, and should enter it especially in a spirit of commercial competition. And I take it that there are two classes to be considered—viz., the clinician and the scientist. The conflict or antagonism between these two is nothing new, nor is it confined to this country. For hundreds of years the clinician has relied on his unaided five senses to carry him through his life-work; but the last twenty years has witnessed remarkable developments, which show that this simple state of affairs can no longer obtain. To many of us, evidence appears lacking that occult things which are revealed to the majority only by the aids of chemistry or microscopy are revealed to a few by means of their unaided five senses. To these unaided senses medicine is, as was stated nearly two thousand years ago by Celsus, "a conjectural art," and one of the chief problems is whether it is to remain a conjectural art or not. Scientific medicine has sunk deep foundations on which a great superstructure of facts has been raised, and it is now known, although not always admitted, that two or more things which look identical to the unaided senses may have causes essentially different. The discovery of these causes has been brought before the notice of the practitioner of medicine by the medical scientist in nearly every instance. A glance at the history of medicine shows that in the evolution of medical knowledge we have passed through various epochs. At first the concept of disease was symptomatological only, and when this was found inefficient, an attempt was made to lay a basis on pathological anatomy. In turn this has had to give way to the ætiological concept. The end and aim of all medical research is that we may create a scientific theory of disease on the basis of which a rational can be substituted for an empirical treatment. All this work, however, shows that medicine and disease are much more complicated than was formerly believed.

Now the attitude of the practical man of medicine has at first been almost invariably one of indifference to the advances of science, and often, indeed, one of hostility. If the scientific method is not of easy application it has been said to have no "clinical" value, and in a large number of instances the clinician has delegated it to some other person. In this way a large number of people have arisen to whom the clinician has delegated a considerable portion of his work. Bacteriological work, chemical work, microscopic work, is now undertaken in laboratories at the request of clinicians, and for them. In recent times the physiologist has also tended to invade the field of practical medicine, and to him is largely due the advances which have been made on the subject of blood-pressure and variations, physiological and otherwise, in the heart. Chemists and pharmacologists are hard at work in the discovery of therapeutic remedies which are ultimately exploited by the practitioner. We frequently hear the clinician assert that the work of physiologists applies to the dog, but not to man. When the physiologist shows that blood-pressure can be accurately determined and recorded in man by scientific instruments of precision, he is told that, although this may be true, his method is not "clinical." Although a sphygmomanometer is accurate, it must be subservient to the highly-trained physician's finger, because the physician cannot carry an instrument with him and because the sphygmomanometer is not clinical. I should like to raise the question what a "clinical" instrument is. The concept of "clinical" seems to be one of inches. If an instrument cannot go easily into the waistcoat pocket it is not clinical. A "clinical" thermometer is something less than 4in. long. If it is a foot long it may be much more accurate, but it is not clinical. A hæmocytometer is apparently not yet a clinical instrument because Zeiss has not yet chosen to make it go easily into the physician's pocket. Personally, I cannot see why this should be so. The surgeon has emancipated himself from this sartorial tyranny, and does not hesitate to take with him any instrument he requires, even in the shape of a real clinical instrument, an operating table. From a practical point of view this makes a considerable impression. What, for example, can be more impressive than the arrival on the scene of labour of a relatively small obstetrician with a very large cephalotribe? If he produced from his pocket a clinical instrument in the form of a gimlet, I imagine he would be discredited in the eyes of his patient.

Coming, in particular, to the question of infective diseases, it appears to me that physicians have been studying these for hundreds of years without making any material advance. I know no instance where the contrary can be urged. We have, on the other hand, very extensive bacteriological research leading to the elucidation of the causes of a large number of infective diseases. These causes have been isolated, their effects and life-histories have been studied, and a great deal is now known about them. Hecatombs of animals have been immolated to determine their effects, and methods of prophylaxis and cure have been worked out. On the basis of all this knowledge, which has been accumulating for thirty years, the bacteriologist has at last said, "Let us try whether these results can be applied to man." What is the answer of the clinician? "No, *you* ought not to do this; you must demonstrate anew to us the grounds for your suggestion. We shall determine for you the value and limitations of this method." The question may, however, be asked: Has the clinician the requisite knowledge and experience to adjudicate in this matter? This is very largely the problem which has led to this discussion. To many practical physicians it seems illegitimate that a bacteriologist or experimental pathologist should have an opinion on a matter concerning man, who is assumed to have an organization entirely different from the animals which the experimenter uses in the course of his work. On the other hand, it cannot be denied that observations on animals can be carried out with much greater precision than in the case of man, who is only partially open to experimental methods.

Now the immunity problem is one which has been very carefully studied in the case of animals, and I would submit that the bacteriologist and immunisator possesses very special knowledge with reference to infective disease. In spite of this, however, he has hitherto been classed as an appendage to the physician or surgeon. That this is not merely the point of view of the bacteriologist may been seen if one refers to the opinions of certain clinicians on this question. Thus I turn to the address in medicine delivered before the British Medical Association in 1908 by Dr. Kingston Fowler,* a man of wide experience and known temperate judgment. He says: "The bacteriologist, in some at least of the general hospitals, is now regarded as the servant of the physician, who orders that certain investigations shall be undertaken. This is not, I submit, the position to which he is entitled. In important cases in which his advice and assistance are required he should consult on equal terms with the physician at the bedside, and the investigations to be made or the treatment to be adopted should be the joint result of their deliberations. That any person professing ignorance of clinical medicine should independently attempt to treat disease is a position so unsound that it needs but to be stated to be condemned." My own experience would lead me to regard Dr. Kingston Fowler's views on this subject as advanced. There is still much of the spirit which moved Chassaignac to exclaim, with regard to Davaine's ex-

* *Brit. Med. Journ.* 1908, ii, p. 253.

periments, "Laboratory results should be brought out in a circumspect, modest, and reserved manner as long as they have not been sanctioned by long clinical researches, a sanction without which there is no real practical medical science."

With regard to the methods advocated by Sir Almroth Wright, it may be said they are not clinical. They presuppose knowledge which is not revealed to the unaided retina or the organ of Corti. They are complicated and difficult methods. I think, however, that they have been embarked upon in a very light-hearted manner in many instances. Writing on this subject five years ago, I suggested that before vaccine therapy was launched on the public it should be carefully worked out in hospital practice under conditions not readily obtainable in private practice, and when its value and limitations had been decided it might be applied as a practical method. This is the way we have tried to conduct this problem at the London Hospital. Cases are sent to us to treat, and when our investigations are at an end, these cases are referred to the clinician for his opinion on the value of the treatment. It would appear, however, that this cautious mode of advance has not been followed everywhere, and the fact that considerable commercial possibilities were likely to accrue from the practice of vaccine therapy at once led to the appearance of a large number of persons who, in spite of a very limited knowledge of bacteriology, began to exploit the method practically. Instead of passing through the moultings necessary for the bacteriologist, they emerged as fully-fledged imagines, to sip with the physicians and surgeons from the fleshpots. If rumour is to be credited, some of them have sipped so deeply that the physicians and surgeons have been perturbed. The contributions of these pseudo-immunizators to medical science are trifling and cannot well be criticised, as they avoid the bacteriological arenas of discussion. Their commercial aptitude would appear, however, to be in the inverse ratio to their bacteriological ability. From what they write they appear to consider that the whole problem of immunity to infective disease is solved by the injection of a vaccine which has been prepared from some morbid product. If one vaccine does not answer, another is tried, liberal payment being demanded all the time. The pseudo-immunizator extends his operations still further to prophylactic courses of inoculation against diseases which leave a trifling degree of immunity, the durability of which is evanescent. Instead of administering vaccines subcutaneously, a short boom was created by the exhibition of antigenic substances *per os*, although numerous experimental data were opposed to such a method. Indeed, the whole problem of vaccine therapy seems to have become so complicated that the value and limitations of the method are difficult to determine. In estimating the value of any therapeutic method the elimination of chance is of fundamental importance. There should be parallel series of cases, those with and those without the treatment in question; and it is only when this is done on a big scale that the true value of vaccine therapy will be known. At present we do not appear to possess accurate data of this kind, and thus we have to rely only on the personal impressions created in the minds of medical men who have witnessed the treatment of infective disease by different methods. It must, however, be clearly borne in mind that the medical man is not infallible, and he is subject to frailties common to other members of mankind.

So far as I have been able to learn, the profession can be resolved into four groups with regard to the question of the value of vaccine therapy. There is, first, the clinician, who boldly and publicly asserts that as a result of his experience he is unable to subscribe to the view that the results of vaccine therapy are better than those obtained with other well-tried methods. This group appears to be small. There is a second and much larger group, who allege this in private, but, for various reasons, do not assert it in public. This seems to include a large number of clinicians. A third, and small group, condemn vaccine therapy by word of mouth, but practise it by hand. I feel sorry to refer to this group, and I only do so because I know it exists. Lastly, there is a group, in which I reckon myself, who consider that results can be achieved by vaccines which have not hitherto been obtained by other and older methods.

It must be remembered, however, that most of the cases which have come into the hands of the inoculators have been thoroughly submitted to other methods of treatment before. We may thus subdivide the cases treated into those that are chronic, severe, desperate, moribund, and dead, for in several instances the patient has died before the inoculator arrived on the scene at all. Had he inoculated, I have no doubt that the result would have been ascribed to a failure of vaccine therapy.

I believe we have hitherto seen the worst of vaccine therapy, and better results will be achieved when it is recognised that this method is not to be looked upon as a *dernier ressort*. Even in desperate cases, however, cure has been brought about in some instances. The attitude of the clinician is nevertheless remarkable. If a desperate case gets well on vaccines, it is alleged to be a question of chance: if it does not get well, the case but confirms the unfavourable opinion which the clinician expressed. Were this kind of logic applied to other methods of treatment, therapeutics would soon be discredited altogether. I have no doubt in my own mind that many cases which have been ineffectually treated over long periods by the most competent in the profession have been cured by inoculation at the end; but it seems very necessary to collect data on a much wider scale and much more accurately before the final value of the method can be determined. We need more science in our profession and fewer clinical impressions."

Spaying Sows, from the Commercial side.

Some interesting German experiments have been carried out by Dr. Hartmann, of the Berlin Station, to determine the question whether it is desirable to spay young sows intended for fattening. The results appear to indicate that but little is gained by the operation. Four sows were spayed when six weeks old, at which time their weight was 44 kilograms. For seven months, with the same feeding and environment, this lot made smaller gains than an equal number of unspayed sows which, at six weeks old, weighed 49 kilograms, but at the end of the eighth month both lots weighed exactly the same. Three months later, at the time of slaughtering, the spayed sows weighed 4 kilograms more than the unspayed, and dressed 79·3 per cent. of carcase to live weight, as compared with 78·65 per cent. for the unspayed animals.—*L. S. J.*

Contagious Dairy Disease.

At the session of the Australasian Science Congress in Sydney, Professor Gilruth, of Melbourne, communicated a paper on an acute outbreak of inflamed udders due to B. lactic ærogenes. The symptoms were like those of ordinary garget, which was not recognised as contagious. The milking machine, which was badly kept, appeared responsible for spreading infection. Experimental inoculation of B. lactis ærogenes obtained from infected cows gave rise to acute inflammation of the particular quarter. The important point is that this bacillus is very common in piggeries and dairies, and might be the cause of most of the painful and swollen udders.—*The Lancet.*

UMI

DISEASES OF ANIMALS ACTS 1894 TO 1910, SUMMARY OF RETURNS.

Period.	Anthrax. Outbreaks Confirm'd	Anthrax. Outbreaks Reported	Anthrax. Animals Confirm'd	Anthrax. Animals Reported	Foot-and-Mouth Disease. Outbreaks	Foot-and-Mouth Disease. Animals.	Glanders (including Farcy) Outbreaks	Glanders (including Farcy) Animals.	Counties Affected Animals Attacked	Sheep Scab. Outbreaks	Swine Fever. Outbreaks.	Swine Fever. Slaughtered. *
GT. BRITAIN. Week ended April 1	17		18				4	4		5	51	518
Corresponding week in 1910		37		58			6	17		10	16	116
Corresponding week in 1909		26		40			16	76	London 3	14	33	332
Corresponding week in 1908		31		38			13	62		17	34	261
Total for 13 weeks, 1911	261		299		1	18	52	183		275	513	5731
Corresponding period in 1910		405		498			92	259	Berwick 1	283	297	2210
Corresponding period in 1909		359		518			147	522		370	366	3209
Corresponding period in 1908		321		441	3	112	213	723		571	398	1906

Board of Agriculture and Fisheries, April 4 1911.

									Parasitic Mange (outbreaks)			
IRELAND. Week ended April 1	...	...	...	...	...	...	...	...	4	5	3	9
Corresponding Week in 1910 ...	...	...	...	...	...	...	...	...	1	11	...	...
Corresponding Week in 1909 ...	1	1	...	...	...	...	...	...	2	30	...	...
Corresponding Week in 1908 ...	...	...	...	...	...	...	...	...	3	3	5	98
Total for 13 weeks, 1911 ...	3	3	...	...	1	1	33		202	35	666	
Corresponding period in 1910 ...	4	6	...	...	...	...	...	...	23	254	11	297
Corresponding period in 1909 ...	2	2	...	...	...	...	...	...	30	227	8	71
Corresponding period in 1908 ...	3	6	...	...	...	...	...	...	15	221	40	953

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, April 3, 1911

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

Clydesdale Horse Society.

At a meeting of Council of this Society held on Wednesday, March 29, in the new office, No. 273, Central Chambers, 93 Hope Street, Glasgow.

VETERINARY EXAMINATIONS.

The Council considered the following report of a meeting of joint committees of the Council of the Glasgow Agricultural Society and the Council of the Clydesdale Horse Society, which is as follows:

Minute of meeting of joint committees of the Council of the Glasgow Agricultural Society and the Council of the Clydesdale Horse Society of the United Kingdom of Great Britain and Ireland called by request of the Chairman and Secretary of the Glasgow Agricultural Society, and held within the office of *The Scottish Farmer* newspaper, 93 Hope Street, Glasgow, on Wednesday, the twenty-second day of February, 1911, at 3 p.m. Present, as representing the Glasgow Agricultural Society: Mr. W. E. Gilmour of Woodbank, Alexandria, Chairman of directors; and Messrs. William Taylor, Park Mains, Renfrew; John Hastie, Eddlewood, Hamilton; John Pollock, Paper Mill, Langside; Walter A. Aikenhead, Meadowbank, Polmont; and John Watson, Secretary, 216 West George Street; as representing the Clydesdale Horse Society: Mr. Stephen Mitchell of Boquhan, President, who occupied the chair; Principal M'Call, F.R.C.V.S., Glasgow; and Messrs. Jas. Weir, Sandilands, Lanark, and Archd. MacNeilage, Secretary. The last named acted as clerk to the meeting. Apologies for absence were intimated from Messrs. James Kilpatrick, Craigie Mains, and James Rodger, Keir Mains.

The business of the meeting was to determine whether it would not be possible to have a joint veterinary examination of all horses exhibited at the Glasgow Stallion Show. After a free discussion, the following resolutions were unanimously agreed to, and referred to the Councils of the respective societies for confirmation or otherwise:

(1) That there be a joint examination by one bench of veterinary examiners for the Glasgow Spring Stallion Show.

(2) That the examining bench consist of three veterinary surgeons, two acting as examiners, and one acting as oversman in case of dispute between the two.

(3) That the appointment of veterinary examiners be made at a joint meeting, consisting of six representatives of the Glasgow Agricultural Society and an equal number of representatives of the Clydesdale Horse Society, the said joint meeting to be held annually on the day of the annual general meeting of the Glasgow Agricultural Society in December.

(4) That the expenses connected with the veterinary examination, including the cost of erection of enclosure and fees, be borne in equal proportions by both societies, and that the income from fees for certificates be divided equally between the said societies.

(5) That it is desirable that all animals whose owners intend that they shall compete for the Cawdor Cup should be nominated for that competition in advance. There will be no fee for such nomination.

A vote of thanks to the Chairman closed the proceedings.

The Council referred this minute back to the joint committees, in order that effect might be given to the following amendments:

(1) On Regulation (1)—that it should read as follows: "That there be a joint examination by one bench of veterinary examiners for the Cawdor Cup, Brydon Shield, and horses selected for the Glasgow Premiums at the Glasgow Spring Stallion Show.

(2) Add to Regulation (2)—"That the same two examiners shall not act two years in succession."

(3) That Regulation (5) be deleted. The Council strongly insisted that the existing rule be adhered to, namely, "That no entry or entry fee be made or charged for horses competing for the Cawdor Cup, except in the case of horses not entered in any of the ordinary classes of the show, and entered only to compete for the Cawdor Cup."—*The Scottish Farmer.*

"Influenza" Among Cats.

As to whether the members of the feline tribe can rightly be set down as the subjects of "influenza," such as is understood by the term when applied to the human species, is a point upon which there has been considerable controversy. The differential diagnosis between "influenza" and "distemper" is often only a matter of opinion, and most veterinary surgeons would diagnose the ailment under the latter name. Distemper of the cat is a well-recognised complaint and very often occurs in such a virulent form as to clear out a whole cattery, causing a loss to the owner in some instances of many hundreds of pounds. In several parts of England at the present time epidemics of distemper are raging in a most fatal and virulent form, and veterinary experts have been called in wherever the value of the animal has permitted of the adoption of such a course. It is well recognised that the disease is spread very rapidly by the habits cats acquire of associating together, especially at night time, and that it is a disease which is very difficult to treat satisfactorily owing to the obstinacy and lack of vital resistance of the patient. A cat taken ill with this disease voluntarily refuses all nourishment and will die if not properly and artificially fed and kept thoroughly warm. In some instances the digestive system becomes affected, ulcers appear in the mouth, and there is a persistent diarrhœa and dysentery. In other cases the throat is violently inflamed, saliva streams from the mouth and lips, and the poor beast looks the picture of abject misery. Although it has never definitely been proved that this disease has actually been transmitted to man, it is certainly a wise precaution for the medical adviser of a household to insist upon the strict isolation, especially from children, of a cat suffering from any symptoms of this kind. In some instances death occurs within three days, but in most cases the cat will linger for a week or longer. Recovery is never certain, but when a cat has begun voluntarily to feed again the convalescence is tolerably rapid. Knowing from the daily press that the disease is prevalent just now among cats, we think that it would be an exceptionally good opportunity for practitioners, who may happen to be in infected districts, to endeavour to trace up authentic instances of infection from cat to man. —*The Lancet.*

Alleged Unwholesome Meat at Southborough —Dismissed.

At the Tonbridge Petty Sessions before Colonel Stanley Williams (in the chair), and other magistrates, Edward Kates, 16, Edward Street, Southborough, dealer, was summoned for unlawfully having in his possession a certain quantity of meat deposited in a certain building for the purpose of preparation for sale, and intended for the food of man, at Southborough, on the 9th to 13th February.

Mr. C. M. Pitman, barrister (instructed by Mr. R. Vaughan Gower), at the outset pointed out that the summons disclosed no offence, but he was willing that it should be amended. The meat must either be alleged to be unsound or unwholesome. Under the present summons any butcher could be proceeded against for having meat in his possession for sale for the food of man.

Mr. Neve (Messrs. Neve and Peach) appeared for the prosecution, and said he agreed that the summons should be amended to "unwholesome or unfit."

Philip Hanmer, clerk to the Southborough Urban District Council, gave evidence as to the appointment of the Inspector of Nuisances, and the order for these proceedings, and

John Dyson, the Inspector, said in consequence of certain information he went to defendant's premises at Yew Tree Farm, and there in a barn he found portions of a carcase of a young bullock. He did not examine it thoroughly, as it was late at night, but the next morning he saw it again, and it was then in the same condition as on the previous night. Later, he saw it again, and found that some of it had been cut and taken away. He next saw defendant and told him he wanted to see the meat hanging in his barn, and he said "All right, I'll come with you." On the way, defendant having returned for the keys, he met the veterinary surgeon, with whom he had made arrangements, and they examined a portion of the meat at the Council Offices, which had been purchased from the defendant. It was unfit for food in his opinion, as it had a peculiar high colour, was very flabby, and the fat had not set, whilst there was a slight soapy feel to the touch, and was of a repulsive nature in appearance. The outer portion of the skin, too, was distended as if it contained gas. They then cut it, and the gas escaped. They afterwards proceeded to the barn, and there saw the remains of the carcase, in which the same characteristics were present. He told the defendant that he had sold some of the meat for human food, and he replied "Yes, I have, I am cooking some for my dinner to-day." He informed him that it was unfit for food. The meat was later seized, and condemned, and ordered to be destroyed by a magistrate. He told the defendant, and gave him the opportunity of having it examined, and he called in Mr. Roberts, a veterinary surgeon. Witness took a portion to Dr. J. Scott Tew, Medical Officer of Health.

Cross-examined: He did not suggest that defendant attempted to sell any of the meat after he told him it was unfit for food. The veterinary surgeon gave a certificate to the effect that the animal had suffered from black-quarter, but he did not know that that had since been discovered to be a mistake.

David Reid Chalmers, veterinary surgeon, Tunbridge Wells, said he was called in by the last witness, and examined the meat at the offices, and found it to be unfit for human consumption. He had no doubt about it whatever. What the animal suffered from before death brought out the conditions he found. They were not due to putrefaction. The meat in the barn was hanging near a horse. It was not a proper building in which to place meat intended for the food of man. The animal must have suffered from some inflammatory trouble. The defendant showed him a letter he had received from a firm stating that they had a bullock crippled in a hind leg, and asking him if it was any good to him at a cheap price. This crippled condition would account for the state of the meat. Since, he had examined it microscopically, he could not say whether or not it had suffered from black-quarter.

Cross-examined: He could not say it was a mistake to say the animal suffered from black-quarter. He could not say when it had been killed.

Re-examined by Mr. Neve, witness said the meat did not compare with that cheap meat sold to the poorer people.

Dr. James Scott Tew, Medical Officer of Health, said he examined some meat handed him by Mr. Dyson. A little later he secured another piece, but could not trace black-quarter. He would say, however, that the animal was in an unhealthy condition when killed, and the meat was unfit for human consumption. His opinion would not be altered if people had eaten some of the meat and not suffered ill-effects.

Cross-examined: He examined the meat for disease, but could find no specific disease. He also examined it, however, to find whether it was fit for human consumption.

William Wordley, veterinary surgeon, Speldhurst, said he saw the animal before it was killed, and it was then suffering from a sprained hock. It was in no way suffering from disease up to Sept. 27th, when he last saw it. On February 17th he saw the meat at the Council offices, and made a thorough examination. The reason the meat had not set, was that it had been killed at Hartfield, and brought to Southborough in a cart. If it had not set, however, that would not render it unfit for human food. The animal, too, was a bull, not a bullock, and bull meat was of a darker colour and coarser. He would say that the meat was quite fit for human food.

Cross-examined: The animal had not entirely recovered from the sprained hock when he last saw it, and he advised the owner to kill it and sell it to a butcher. He did not find any gas in the tissues.

John Goodwin, Springfield Road, Southborough, said he assisted the defendant to kill the animal at Hartfield. It was cut up in the barn, and he noticed nothing wrong with it. He bought some of the meat, and he and his family ate it, but suffered no ill-effects. They had some of the liver.

Mr. Pitman: Well, you could not eat that if it was diseased. Did you have any left?—No, we finished it. It was so nice, eh? (Laughter).—Yes, I'd like some more. (Renewed laughter).

Frederick Newland, Springfield Road, said he bought some of the meat from the last witness, and he and his family ate it and found it quite good.

Susan Osborne, Springfield Road, said there were eleven in her family, and they all had some of it, and found it good, apart from the "humour" she heard about it. (Laughter).

Mr. Pitman submitted that the case must fail, and pointed out that eighteen persons had been traced who had eaten some of the meat, and suffered no ill effects, and surely that, he said, was the best test as to whether it was wholesome or not.

The Bench came to the conclusion that the evidence before them did not justify a conviction, and dismissed the case.—*Tunbridge Wells Advertiser.*

Action for Negligence at St. Helens.

At the County Court on Wednesday, March 22nd, his Honour Judge Shand and a jury had before them an important case, in which Messrs. Critchley and Smith, grocers and bakers, St. Helens, sued Mr. R. F. Watson, M.R.C.V.S., Claughton Street, for £33, the value of a horse whose death they alleged was due to the negligent manner in which defendant had treated it. Mr. H. Lindon Riley (instructed by Mr. A. E. Tickle) appeared for the plaintiffs, and Mr. Alfred Elias (instructed by Mr. A. E. B. Griffin) appeared for the defendant.

James Smith, partner in the firm of Critchley and Smith, bakers, 1 and 3 Crowther Street, said that in connection with the business they had bread vans. Before the 26th January they had a horse which passed into the possession of the defendant. They had had it nearly three years. It cost £33, and it was 15-3 hands high, weighing about 14 cwt. Up to the day before the 26th January the condition was good from the time they bought him. He worked every day since they had him, and never missed a meal. Two tumours appeared on the near hind leg, and also warts appeared. Witness saw Mr. Watson on the subject of an operation. He saw him at the surgery on the morning of the 26th January. Mr. Watson said that after he had removed the warts and tumours the horse would make £35 to £38 at either Crewe or Wrexham this coming May. Witness left the horse for the operation. He said he thought it would be as well to cast him, and witness deferred to his judgment. About 2 o'clock the same afternoon witness received a message for him or his partner to go to the surgery. When witness got there Boardman, the defendant's ostler, was in charge. The horse was then lying on its side in the loose box. Boardman said the horse had been cast about 11 o'clock in the forenoon, and said he could not understand how it was that he could not get up. He said that men named Millington and Durie, besides himself and master, had assisted in the casting. It was obvious that the horse could not use its hindquarters, and with his front legs was fighting to get up. Witness called to see the defendant later in the day. The horse had crawled to the other side of his box. He was sweating and steaming, and the defendant probed the horse to demonstrate that his hindquarters were paralysed. Witness said it was no use his probing him, as he could see it was literally dead. The horse was eating the litter, and witness asked him if it was not time he had some hay to eat instead of dirty straw covered with blood. At 3 o'clock the horse had been got into slings. Later that night, in the Lingholme Hotel, witness saw the defendant himself, and he told him he had seen the horse in slings. On Saturday, the 28th, witness called and saw the horse again at noon. It was still in slings, and witness called again, but on neither occasion was defendant there. On the 30th January Boardman brought word that the horse had died about 11 o'clock on the Sunday night. Witness asked if he died in the slings, and he said the boss lowered him down and put an end to him. Witness asked him who gave him instructions to kill the horse, and he said "You had better come down and see the boss," and witness went at 10 o'clock that morning. The horse was not there, and only Boardman was present. He told witness that the horse had been removed to the knacker's slaughter-house at Merton Bank. About half an hour after defendant came in and said he was very sorry at what had occurred in connection with the death of the animal. He said it had died about 11 o'clock the previous night. He said he was going straight away to make a post-mortem examination. Witness asked him was he prepared to give the cause of death in writing, and he promised to do so. Witness got the certificate on the 6th February. Between the 30th January and the 6th February witness called twice a day for the certificate, but defendant kept putting him off time after time. Defendant said he would let them have whatever physical parts he thought might show the cause of death. Witness asked for the backbone, and defendant promised it, but did not let him have it—only the bladder and one kidney, on Wednesday, 1st February, for inspection only. These were in defendant's possession all the time. The bladder was ruptured in two places. There were two holes in it. Witness formed the opinion that the smaller of the two looked as though it had been cut. The smaller hole was next to the tube end. It might have been caused in the post-mortem. On the 26th January the horse was more valuable than on the day it was bought. What Mr. Watson said about the price was fair. Witness would not have sold the horse for £35 before it was taken to Mr. Watson's. It cost £33 originally. When the horse was in the slings his legs were crossed under him, though they were hobbled. The hobbles were on up to the Saturday night. Up to the time

the horse was entrusted to Mr. Watson it was in perfect health.

By Mr. Elias: Mr. Watson had attended the same horse for the purpose of removing two warts on its stomach. Witness was satisfied on that occasion. After that the horse did not develop other warts and tumours, it had them previously. There were not fifty on the horse. It was not covered with them. Witness counted them often. There were only two tumours and ten warts. Witness did not tell Boardman that they wanted to sell the horse, and were afraid to let the police see its unsightly appearance. Witness did not object to the casting, because Mr. Watson said it would be better for the safety of himself. Witness knew that defendant was a M.R.C.V.S. Witness said he left it with him to do his best. Witness did not say he knew defendant would do his best. Defendant asked him to stay and see the operation, but he refused. Witness was not asked to assist in the casting. Witness did not know anything about casting horses, but had seen them cast. He had never seen them cast with three or four men. Witness saw some straw in the stable. He was informed the same day that the operation took place that there was something the matter with it, and he went over to Mr. Watson's. Defendant asked him to come over about 2.30, and witness went, but did not see him till 3 o'clock. Boardman was there, and witness said the horse's back was hurt, and that it had been done in throwing. In the evening there was a man named Brown there. Witness did not say he was quite satisfied. What he said was that he was sure he was paralysed behind. Mr. Watson ought to have informed them if he was going to do anything with the horse. Witness did not know that the horse was *in extremis* on Sunday night. He did not know it collapsed in the slings. Witness saw Mr. Watson on the Monday, and he said that he would make a post-mortem examination, and witness asked for a report. Witness knew that the horse was sent to Moncrieff's, but not till defendant told him. The post-mortem was conducted at Moncrieff's. Witness was not present when the horse was slung.

By Mr. Riley: If witness had been sent for he would have liked to have exercised his opinion in the matter.

James Critchley, partner of the last witness, said that before the 26th January, when the horse was sent, witness had told defendant about the warts, and he said he could remove them in half an hour. On the occasion of the previous operation the total charge was only half a guinea. There were only 10 to 15 warts and tumours, and not about 50 as alleged. Witness saw the horse in the loose box. Witness had seen horses cast. He had always seen six or seven men, and they had plenty to do if a maximum of safety was to be obtained with a heavy horse.

By Mr. Elias: Witness had never assisted in casting a horse. The weight of the horse was between 13 and 14 cwt. That was not guesswork, for it had been weighed. Witness did not instruct another veterinary surgeon, because the defendant never gave them another chance.

William Owen Williams, F.R.C.V.S., and an ex-President, said he had had 30 years' practice, and was the editor and reviser of his father's famous book. He had had an opportunity of perusing the certificate of death given by the defendant. Assuming that the horse was of the weight and size stated, he thought that he should have at least five men, not including himself as operator. In his opinion the five would have to be strong men; there would be plenty for them to do. If hobbles were used he would want six. Three to pull the main rope, two at the back rope, and one at the head. Assuming that up to the hour it had been entrusted to the veterinary surgeon it had been working well and in good condition, and immediately after the operation the horse was paralysed in the hindquarters, it was witness's opinion that it broke its back. It would not be feasible by 11 o'clock in the morning—an hour after it had been entrusted—that the horse could have a ruptured bladder or nephritis. He had never heard of such a case. If a veterinary surgeon diagnosed anything so serious as that he thought a veterinary surgeon's duty to his client, and in his own behalf at least, was to call one or two other veterinary surgeons, and let his clients have the option of calling a veterinary surgeon, and let the veterinary surgeons confer. There was conclusive evidence that the ruptured bladder was not the cause of paralysis. He was merely stating, in giving his opinion, what he thought a reasonably-minded practitioner would do. He never casted horses for operations in a loose box. In a loose box there was much greater risk of damage to all concerned. When the defendant said that death was accelerated by the operation he did not see any relationship between the death resulting from the operation for warts or tumours.

By Mr. Elias: There were always great elements of risk in casting a horse, no matter what amount of care was used. There was only a remote danger of injury to the kidneys. Broken legs and broken backs were immediate dangers. If the right kidney was in a suppurative condition it pointed to disease. The condition of the kidneys would not account for the inability of the horse to voluntarily pass urine. If the horse was able to walk a little distance that would negative the idea of a broken back. If uræmic poisoning was set up that might cause paralysis or death. Assuming a horse could walk, it had not got a fractured back with injured cord, but horses might have a broken back without having paralysis. The cause of death was a broken back—if there was one—and injury to the cord.

His Honour: Am I to understand from your evidence that there was always a great risk and that a back or leg may be damaged or broken?—Yes.

I don't say you have suggested in this case that there was negligence, but the only negligence that you can suggest so far as I can see, is that if there were less than five or six men employed, it was increasing the risk?—The risk increases the smaller the number of men employed.

That is all you can point out as having been done wrong, so far as you have heard?—I don't suggest anything was done wrong; I simply say I myself would have had six men.

This closed the case for the plaintiff, and the court adjourned.

Defence.

Mr. Elias, on resuming, submitted that there was no case to answer.

His Honour: Oh, you must go to the jury.

Robert Fraser Watson, M.R.C.V.S., said he had been in practice fifteen years altogether, six in St. Helens. In the South African war he was veterinary surgeon to the forces. He is veterinary surgeon to the West Lancashire Divisional Engineers. He attended the horse in question last year for a simple operation. He saw the horse pretty often. Plaintiffs asked him what the value of the horse was, and he said he could not value it with the tumours, but without it was worth £32. On Thursday, January 26th, Smith brought the horse, but would not stay for the operation. The bed was at once prepared, and Smith knew the casting was about to take place in the loose box, where witness had cast many horses. There were 40 or 50 warts and tumours. One was, he should say, half a pound weight. The horse weighed, he thought, between 10 and 11 hundredweight. It was a van horse. Witness brought out the hobbles, which were of the latest and best pattern. He got a staff together of four men besides himself. Witness put the hobbles on in the usual way. There was a rope attached to the chain. There was no back rope, as suggested by Prof. Williams. Witness had never seen one

used. It might be a help, but could be done without. One of the men had little to do, and he could have been done without. Witness never saw a horse fall better in his life. The floor was well prepared; there was 16 inches of straw on the ground. The operation lasted 20 minutes or half-an-hour. The horse got up after and staggered two steps. He got down and they let him lie about half-an-hour; witness thinking he was cramped. He had to get further assistance, and got the horse into the slings.

His Honour: What time was that?—About five o'clock.

Witness found that the horse could bear no weight on his legs. He then decided to let him out of the slings, as he was afraid it would kill him to let him remain in the sling. About a dozen men assisted in the slinging. The following morning further attempts were made to sling the animal, and after three attempts it was supported on its legs by means of the slings. It appeared to get stronger on its hind legs. It had everything possible in the way of food. He kept it in the slings until Sunday night, when it fell into a state of collapse. He decided it was cruel for it to be kept in the slings, as there was great pressure on its intestines and bladder, the latter being pressed against the pelvis. Seeing the horse was dying he decided to put it out of its misery. When it collapsed in the sling, that, in his opinion, would account for the rupture of the bladder. On Sunday night, at 11.30, he thought it was useless to send word to plaintiff, so he did not send for him until the next morning. In the presence of two men, Brown and Marsden, plaintiff said he was absolutely satisfied with all that had been done. He suggested a post-mortem to plaintiff, and the latter also said he had done perfectly right to send it to the knackers. Witness invited plaintiff to the post-mortem, but he said he had not time. The kidney had suppurative nephritis. That would have a secondary effect on the passage of the horse's urine and would cause uræmic poisoning. He examined its back as well, but could not find any fracture. His first opinion was that there must have been something wrong with the back; but he could not find anything. The practice in casting horses had been to have three or four men; on this occasion there were five, including himself. He took every care in casting the horse. He could not possibly get into an open field. The loose box was 17ft. by 12ft. It was not necessary to have a bed of at least 12ft. square when casting a horse.

Cross-examined by Mr. Riley: Defendant said he had four men to assist him—four on the rope and one at the head of the horse. He worked himself at the operation. He had to do so; he could not afford to keep men and do the work himself. There was nobody at the rear, and he did not think it was necessary to have a man there. He had not only seen two men at the rear in casting a horse, but had seen twenty at demonstrations. There was great danger through having too many men. They pushed the horse over too suddenly sometimes. He cast the plaintiffs' horse the only way he knew, and the only way he had ever done it.

Mr. Riley: Then you don't think the two men that Professor Williams spoke of of any use?—I don't use them. I might have seen them fifteen years ago at College.

Mr. Riley suggested that witness was drawing on his imagination, and asked what College it was in which he had been trained.

Witness replied that it did not matter at all.

Mr. Riley: When you went to make the post-mortem you thought there might be some injury to the backbone?—Yes.

Did Mr. Smith say that he would like to see the backbone after?—No, he never mentioned it. If I had seen a fractured bacuk I should have put it in the report.

I suggest to yon that not finding it was as significant as finding it.—It was not my horse. If Mr. Smith wanted it he should have seen to it himself.

Witness said he had no idea that Mr. Smith was dissatisfied until he got a solicitor's letter.

Mr. Riley: Your case is this: that if the spine were injured it was an accident that would have happened with anyone?—Yes.

By Mr. Elias: It was common for a horse to break his back on his own on the floor by powerful muscular contraction.

Wm. Woods, F.R.C.V.S., for ten years examiner to the R.C.V.S., now in practice in Wigan, said he had had 30 years' practice. He had frequently cast horses for operations of this kind. He had heard Mr. Watson, describe the operation he had conducted. Witness thought five men ample for the work described. He himself had frequently cast horses with four; he would be pleased to have five. He agreed with Prof. Williams that injury to the spine was an accident that could result from casting. It could occur with all the care in the world being used. From what he had heard he thought there was some injury to the spinal cord, but not fracture. He knew that the horse stood two days in the slings, and that was against a broken back. Whilst a horse was on the ground and in hobbles it was the time a horse might break its back by struggling and muscular contraction. He thought Mr. Watson had done everything possible in the slinging of the horse. He had seen the loose box, and thought it plenty big enough for the operation.

By Mr. Riley: Witness considered a twelve-foot square bed was a nice size, and a size he would order. In his opinion the number of men required depended upon the weight and size of the horse. He had put a pit pony down himself.

Percival Carter, M.R.C.V.S., had seen the loose box. He corroborated the evidence of the last witness.

William Boardman, groom in the employ of the defendant, said he had had a large experience of horses. He was 12 years in the 12th Lancers, and had been horse-keeper to the St. Helen's Corporation. The casting was well carried out. There was a good bed, with plenty of sawdust and straw laid 15 inches deep.

By Mr. Riley: Witness had no recollection of telling Mr. Smith that there were only three persons assisting in the casting.

Thos. Millington, foreman for Thompson, McKay and Co., Great Central Railway Co. carters, said that he assisted in casting the horse, which weighed about 10 to 11 cwt. He was at the head. He never saw a horse go down better, and the staff of helpers was quite sufficient.

By Mr. Riley: He denied having told Mr. Tickle that he must work hand in hand with Mr. Watson, as he could do him a lot of harm, he being the veterinary surgeon to Thompson, McKay, and Co.

Robert Durie, dentist, Cottam Street, said he assisted in the casting. He had helped in similar operations before, and thought that one was done properly.

By Mr. Riley: Witness was there casually, and was just asked to lend a hand.

Mr. A. E. B. Griffin, solicitor, brother-in-law to the defendant, said that he was present when Mr. Smith brought the horse. He heard Mr. Watson ask him to stay, and plaintiff refused. Witness assisted in the casting. The horse went down quietly, and there was no indication of it having been injured.

Mr. Elias again addressed the jury, arguing that there had not been the slightest negligence, and that every precaution had been taken to avoid injury.

Mr. Lindon Riley criticised the evidence, and with reference to the statement made that there were four

men assisting Mr. Watson, he submitted that the jury could not doubt what Mr. Smith had told them. He said that Boardman had told him and gave him names —his own, Durie's, and Millington's. Boardman had also said in reply to him that the horse had never got up again, and yet Mr. Watson said the horse got up and walked. He said he came to the conclusion that its back and its spinal cord were not injured. Mr. Riley also pointed out that Millington said he had to work hand in hand with Mr. Watson, and he said they would have to put a statement of that kind in the second class, to go no further than that. Then there were young Mr. Durie, the dentist, and young Mr. Griffin, the solicitor. He was not going to say an unkind word about them, bnt he did not think they were endowed with that robust frame which was the subject of comparison and observation between Prof. Williams and Mr. Wood. He could not imagine men who would be less at home in the job of bringing down that horse—whether it was ten, eleven, fourteen, or sixteen cwt.—who would be more out of their element than those two men. He also pointed out to the jury that Mr. Watson would not suffer as it had been hinted by Mr. Elias. He submitted that Mr. Watson was guilty of a gross error of judgment, and had yielded too readily to doing the job in a haphazard manner.

His Honour, in summing up, said the plaintiffs sued the defendant for £33 because they said the way in which he performed the operation had caused the horse's death. It had been very properly pointed out to the jury that a charge of that kind brought against Mr. Watson was of serious import, for his livelihood depended upon his own skill in his profession. The allegation was that defendant. by his negligence, caused the death of that horse. The case was reduced to a very small issue, though started with many allegations. The plaintiffs put it that defendant employed only four men, but it seemed there were five. They said he employed five instead of six, as held by Prof. Williams to be necessary. Were the jury going to say that the man was negligent because he employed five instead of six? They had the strength there, and got the horse down. Because Prof. Williams said he would have six men, were they to say that defendant was negligent if he got the horse down with five? Then they said that the operation was performed in a loose box when it ought to have been in the open. Well, the time of the year was against that. They were not going to perform an operation of that kind in the open. In January they would not in choice pull the horse down in a field when they had a loose box 17 ft. by 12 ft. where they could do it. Were they going to say that because the defendant operated in a loose box instead of a field he was guilty of negligence? Those were the only two things on which they ceuld have the least shadow of a case. Everybody agreed that it was right for the defendant to cast the horse—it was a proper thing to do. Now, what was casting? Taking the evidence of Prof. Williams, he showed that however careful they were, one of the dangers was a broken back, injury to the spine, or to the legs. Now everybody was agreed that it had some injury to the spine, yet was the defendant liable for that injury? By the evidence of the plaintiffs' own witness those operations were always attended with risk. Prof. Williams said that there was paralysis, because it had an injured cord. "An injured cord might happen in the best regulated operation." Because that had happeffed plaintiffs said that defendant was guilty of negligence! It seemed to him the evidence was all one way.

The jury found for the defendant, and judgment was entered accordingly.—*St. Helen's Newspaper and Advertiser.*

The Lowest Tender.

At a meeting of the Tottenham District Council on Tuesday, March 21st, there were three applications for the appointment of veterinary surgeon for one year. Mr. H. H. Hide, of Edmonton, at 16s. per horse per year; Mr. R. J. Foreman, of Tottenham, at 15s.; and Mr. M. J. Carroll, of Clapton, at 10s.

The General Purposes Committee recommended the appointment of Mr. Foreman.

Mr. H. Knight said Mr. Foreman was his own vet., but he thought for the sake of £3 a year to throw over a man who had served them well for 25 years was wrong. He did not think they would change their own doctors on the same principle. He moved the recommendation be referred back.

Mr. Beales seconded, so that they might have reason given for not accepting the lowest tender.

Mr. Brown said that for a considerable time the Council had had the sacking mania on, wishing to discharge people, and hoping to get somebody cheaper.

The Chairman took exception to the remark.

Mr. Turrell thought the Committee's recommendation was a step in the direction of economising, and getting their £10,000 balance. (Laughter.) He therefore supported it.

Mr. Barns thought it could not be in the interests of the Council to take the work from a man who understood all their horses. It was an abominable principle.

Mr. Elder said Mr. Hide had always done his work well, and no reflection against him was intended by the Committee's recommendation.

Mr. Harvey thought the Committee's recommendation, having regard to the long service of Mr. Hide, was approaching meanness. Mr. Turrell must know, as a tradesman, the perniciousness of the system of keen competition.

Mr. Clegg declined to change an old servant for a new for the sake of a shilling a year a horse.

Mr. Barker said the thing ought never to have been put out to tender at all, and by doing so the Council put the Committee in an awkward position.

Mr. Elder, as Chairman of the Committee, agreed to take the recommendation back.—*The Weekly Herald* (Tottenham).

REVIEW.

THE ENCYCLOPEDIA OF SPORT. 2nd edition. Edited by the Earl of SUFFOLK and BERKSHIRE. Parts xvij —xviij. (Law—Obs). Price 1/- net per part. (W. Heinemann, 21 Bedford Street, London, W.C.)

As is usual with this Encylopedia, the present two issues show plenty of variety in their contents. Part xvij commences with the continuation and conclusion of the long article on lawn tennis, the major part of which appeared in Part xvj. The last few pages of Part xviij, on the other hand, are taken up with a long subdivided article, not yet completed, upon obsolete sports, which includes sections upon cock-fighting, bull, bear, and badger baiting, and even mediæval tourneys, should be sufficiently "obsolete" in its subject-matter to please the veriest antiquarian.

Two other lengthy sub-divided articles deal respectively with "Local Sports" and "Military Sports," the former including such subjects as knur and spell, arrow throwing, fell racing, hound trailing, etc., while the latter deals with the various military competitions and exercises which are always of great spectacular interest to civilians. Motor-boating is also treated at some length; and there is a very long article upon mountaineering, which includes sections upon mountain and cave exploration, and which many readers will find the most

interesting item in these two issues. Of minor subjects not without special interest to sportsmen at home and abroad, the short account of the British laws regarding dog, gun, and game licences, and the longer illustrated illustrated article upon the lazo and its use, should be mentioned.

A large number of foreign wild animals fall within these two issues, and undoubtedly the two of major interest are the lion and leopard. Both of these are dealt with at considerable length, Mr. F. C. Selous being one of the contributors as regards the lion. The others vary greatly in interest and importance—even the grey mullett receiving some notice—but upon the whole the most noteworthy ones are the lynx, moufflon, mule deer, musk ox, muskalonge, and nilgai. W. R. C.

Echinococcus in Man.

Dr. Wynn Westcott held an inquest at Hackney on Saturday, April 1st, on the body of William Butcher, a carman, aged 22, of Gransden Terrace, who died suddenly on Thursday.

Mrs. Butcher stated that her husband had recently complained of indigestion and a slight cough, and he imagined that he had bronchitis. As they were about to go for a walk he suddenly complained of dizziness, fainted, and died almost immediately.

Dr. Wilson, who had made a post-mortem examination, said the case was one of a most unusual character, especially in this country. In the liver he found 15 or 20 cysts (specimens of which he produced in a bottle) showing that Butcher had been infected by eggs from the tapeworm of a dog. This was of very rare occurrence in this country, but it was not uncommon in Australia and other countries, where the people mixed more commonly with dogs. The man must have had the cysts for some months. The liver weighed 116oz., and the spleen and kidneys were enlarged. No one could have guessed the nature of the disease. The cause of death was syncope consequent upon hydatid cyst of the liver.

The Coroner said the danger arose through dogs going about into all kinds of places, and among vegetables, such as watercress, and in that way the infection was carried. In Iceland and other countries, where people lived in huts, and had their dogs living and sleeping in the same compartment, the eggs got scraped up with the food, and such cases were not uncommon, but the disease was extremely rare in this country.

The widow said her husband was very fond of animals, and had mixed freely with dogs in the stables where he worked.

The jury returned a verdict in accordance with the medical evidence.—*The Times.*

Donations to R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons desires to acknowledge the receipt of further donations to the College funds, from Messrs.

A. J. Down, Sampford, Peverill	1	1	0
Capt. R. W. Mellard, A.V.C., India	1	1	0
Arnold Spicer, New Oxted	1	1	0
Amount previously acknowledged	73	10	0
	£76	13	0

ARMY VETERINARY SERVICE.

Extract from *London Gazette*,

WAR OFFICE, WHITEHALL, April 4.

Capt. H. E. Gibbs, Army Veterinary Corps, to be Deputy Assist. Director-General at the War Office. Dated April 1.

TERRITORIAL FORCE. ARMY VETERINARY CORPS.

J. H. Primmer to be Lieut. Dated March 20.

Personal.

WOODRUFF.—On April 3rd at Clevistone, Langley Park, Mill Hill, N.W., to Harold and Margaret Woodruff, a son.

OBITUARY.

ROBERT MILLER, M.R.C.V.S., Townhead St., Strathaven, Lanark. Graduated, Glas: July, 1896.

Mr. Miller's death occurred suddenly on Friday, 31st March, from cardiac failure, at the early age of 35.

The death of PAUL CAGNY, veterinary surgeon, of Senlis, France, is also announced. He died on Feb. 25th last in his 65th year. He graduated from the Lyons Veterinary College in 1874, and started in practice along with his father in his native town, where he had an extensive *clientèle*. He was a frequent contributor to veterinary literature and was the author of several works, the chief of which are his *Formulaire des Vétérinaires Practiciens*, which has reached its 7th edition, his *Dictionnaire Vétérinaire* in two volumes, "*La Cheval de Course*" and "*Signol's Aide-Mémoire du Vétérinaire*, having for his collaborator in the two latter, H. J. Gobert. He belonged to several French and foreign societies, including the Société de Médecine Pratique de Paris, the Société de Thérapeutique, Société Centrale de Paris, Société de Médecine Pratique, Société Vétérinaire d'Alsace-Lorraine, the Swiss Veterinary Society, etc. He was also Officer of Public Instruction, Officer of Agricultural Merit, and Chevalier of the Order of the Lion of Zæhruigen. In 1894 he held the office of President of the Société Centrale de Médecine Vétérinaire of Paris of which he was also a laureate. On Jan. 20th, 1886, he was elected an Honorary Associate of the Royal College of Veterinary Surgeons, London.

ANOTHER LOWEST TENDER.

Sir,

For over twenty years I attended the horses of the Tottenham District Council by contract at a fee of one guinea per horse, and the same amount for examinations. Last year a neighbouring practitioner offered to do the work for 17s., and he has lately reduced it to 15s., while another who lives two miles away has sent in a tender of 10s. These prices are to include examination fees. I enclose a cutting from a local paper showing how the offers were received.—Yours faithfully,

H. H. HIDE.

Edmonton.

LIVE AND LET LIVE.

Sir,

I quite agree with your remarks on the subject of "The Lowest Tender" in your last issue, and think something should be done to put a stop to the pernicious system of tendering for veterinary services.

This question might, I believe, be properly dealt with by the Council of the Royal College of Veterinary Surgeons after it had been thoroughly thrashed out by the various veterinary societies in the kingdom. Perhaps then the Council might see its way to suggest to the various Municipal, Borough, etc., Councils that they should offer remunerative fees for professional veterinary services and advertise for applicants.

We grumble about the reduction of fees and the diminution of scope for our activities, but the remedy lay in our hands if we were more united on the question of a fair remuneration. Surely a fee of £1 1s. per head per annum is low, but 7/- or one-third this sum is worse than going to the dogs at 1/- a time. I am glad, however, to see the Fulham Borough Council has some practical business men in its composition, who feel that to get efficient veterinary services they should pay for them accordingly, and enable one to "live and let live."—Yours truly,

"VIS UNITA FORTIOR."